Amendments to the Claims:

1. (previously presented) A method for tissue augmentation or restoration in a mammal, wherein said tissue is other than an intervertebral disk, said method comprising: injecting a polymer at a tissue site in need of augmentation and having a tissue temperature, said polymer comprising repeating peptide monomeric units selected from the group consisting of nonapeptide, pentapeptide and tetrapeptide monomeric units, wherein said monomeric units form a series of ß-turns separated by dynamic bridging segments suspended between said ß-turns, wherein said polymer has an inverse temperature transition T_t less than said tissue temperature, and wherein said polymer is injected as a water solution at coacervate concentration in the substantial absence of additional water.

2. (original) The method of Claim 1 wherein said coacervate concentration has a viscosity at said tissue temperature of 1 to 100,000 millipoise.

3. (original) The method of Claim 1 wherein said polymer is cross-linked but extrusible.

4. (original) The method of Claim 1 wherein said polymer is a copolymer formed from one of said monomeric units and a second peptide unit containing 1-100 amino acids.

5. (original) The method of Claim 4 wherein said second peptide unit contains 1-20 amino acids.

6. (original) The method of Claim 1 wherein said polymer comprises a block or random copolymer comprising at least two of said monomeric units.

7. (original) The method of Claim 1 wherein said polymer comprises an elastomeric polytetrapeptide or polypentapeptide.

8. (original) The method of Claim 7 wherein said polymer comprises tetrapeptide units selected from the group consisting of VPGG (SEQ ID NO:16), GGVP (SEQ ID NO:41); GGFP (SEQ ID NO:42) and GGAP (SEQ ID NO:50).

9. (original) The method of Claim 7 wherein said polymer comprises pentapeptide units selected from the group consisting of VPGVG (SEQ ID NO:17), GVGVP (SEQ ID NO:20), GKGVP (SEQ ID NO:43), GVGFP (SEQ ID NO:44), GFGFP (SEQ ID NO:45), GEGVP (SEQ ID NO:48), GFGVP (SEQ ID NO:49) and (GVGIP) (SEQ ID NO:51).

10. (original) The method of Claim 1 wherein said polymer is a copolymer comprised of tetrapeptide and pentapeptide units.

11. (original) The method of Claim 5 wherein said second peptide unit comprises the cell attachment sequence, GRGDSP (SEQ ID NO:46).

12. (original) The method of Claim 5 wherein said second peptide unit comprises GVGVAP (SEQ ID NO:47) or VGVAPG (SEQ ID NO:52).

13. (original) The method of Claim 4 wherein said second peptide unit comprises a cell attachment sequence from the Type-III domains of fibronectin, vitronectin, tenascin, titan and other related cell attachment proteins.

14. (original) The method of Claim 1 wherein said polymer comprises a plastic polypeptide.

15. (original) The method of Claim 1 wherein said polymer is injected in combination with a further component selected from the group consisting of host-compatible cells and growth factors.

16. (original) The method of Claim 1 further comprising injecting an osteogenic factor at said site.

17. (original) The method of Claim 1 wherein said polymer is contained within a pharmaceutically acceptable liquid carrier, which further comprises one or more biologically active factors to aid in the healing or regrowth of natural tissue.

18. (original) The method of Claim 17 wherein said factors are selected from the group consisting of heparin, epidermal growth factor, transforming growth factor-α, transforming growth factor-β, platelet-derived growth factor, fibroblast growth factor, connective tissue activating peptides, β-thromboglobulin, insulin-like growth factors, tumor necrosis factors, interleukins, colony stimulating factors, erythropoietin, nerve growth factors, interferons, osteogenic factors and bone morphogenic proteins.

19. (original) The method of Claim 1 wherein said tissue site is periurethral.

20. (original) The method of Claim 1 wherein said tissue site is subdermal.

21. (original) The method of Claim 1 wherein said tissue is soft tissue.

22. (original) The method of Claim 1 wherein said tissue is hard tissue.

23. (previously presented) A method for tissue augmentation or restoration in a mammal, wherein said tissue is other than an intervertebral disk, said method comprising the steps of

a) identifying a tissue site in need of tissue augmentation or restoration, said site having a site temperature (T_s); and

b) injecting a polymer at the site, said polymer comprising repeating peptide monomeric units selected from the group consisting of pentapeptide and tetrapeptide monomeric units, alone or in combination, wherein said monomeric units form a series of ß-turns separated by dynamic bridging segments suspended between said ß-turns, and

wherein (i) said polymer has an inverse temperature transition T_t less than T_s, (ii) said polymer is injected as a water solution at coacervate concentration in the substantial absence of additional water, and (iii) said coacervate has a viscosity at T_s of 1 to 100,000 millipoise.

24. (original) The method of Claim 23 wherein said polymer is cross-linked but extrusible.

25. (original) The method of Claim 23 wherein said polymer is a copolymer formed from one of said monomeric units and a second peptide unit containing 1-20 amino acids.

26. (original) The method of Claim 23 wherein said polymer comprises a block or random copolymer comprising at least two different monomeric units.

27. (original) The method of Claim 23 wherein said polymer comprises an elastomeric polytetrapeptide or polypentapeptide.

28. (original) The method of Claim 27 wherein said polymer comprises tetrapeptide units selected from the group consisting of VPGG (SEQ ID NO:16), GGVP (SEQ ID NO:41); GGFP (SEQ ID NO:42) and GGAP (SEQ ID NO:50).

29. (original) The method of Claim 27 wherein said polymer comprises pentapeptide units selected from the group consisting of VPGVG (SEQ ID NO:17), GVGVP (SEQ ID NO:20), GKGVP (SEQ ID NO:43), GVGFP (SEQ ID NO:44), GFGFP (SEQ ID NO:45), GEGVP (SEQ ID NO:48), GFGVP (SEQ ID NO:49) and (GVGIP) (SEQ ID NO:51).

30. (original) The method of Claim 23 wherein said polymer is a copolymer comprised of tetrapeptide and pentapeptide units.

31. (original) The method of Claim 25 wherein said second peptide unit is selected from the group consisting of GRGDSP (SEQ ID NO:46), GVGVAP (SEQ ID NO:47) and VGVAPG (SEQ ID NO:52).

32. (original) The method of Claim 23 wherein said polymer is injected in combination with a further component selected from the group consisting of host-compatible cells and growth factors.

33. (original) The method of Claim 23 wherein said polymer is contained within a pharmaceutically acceptable liquid carrier, which further comprises one or more biologically active factors to aid in the healing or regrowth of natural tissue.

34. (original) The method of Claim 23 wherein said tissue site is periurethral, subdermal, tendon or cartridge.

Claims 35-75 (cancelled)

76. (new) A method for tissue augmentation or restoration in a mammal during a process of plastic or reconstructive surgery to replace missing tissue, or augment existing tissue wherein said tissue is other than an intervertebral disk, said method comprising: injecting a polymer at a tissue site in need of augmentation and having a tissue temperature, said polymer comprising repeating peptide monomeric units selected from the group consisting of nonapeptide, pentapeptide and tetrapeptide monomeric units, wherein said monomeric units form a series of ß-turns separated by dynamic bridging segments suspended between said ß-turns, wherein said polymer has an inverse temperature transition T_t less than said tissue temperature, and wherein said polymer is injected as a water solution at coacervate concentration in the substantial absence of additional water.